

PRODUCT DESCRIPTION

Stonchem 658 is a 100% solids, high performance epoxy, heavyduty lining system applied at a nominal thickness of 3 mm. The base coat liquids are reinforced with a fiberglass scrim cloth that reinforces the system to resist the stresses caused by cracks. The heavily broadcasted aggregate topcoat over the fiberglass scrim cloth helps protect the fabric by providing a wear layer that adds durability and abrasion resistance to the system – more than a typical reinforced lining system. Stonchem 658 has excellent resistance to sulfuric acid up to 98%.

USES, APPLICATIONS

- Process slabs
- Tank farms
- Chemical loading and unloading areas
- Spill containment areas
- Truck unloading areas

PRODUCT ADVANTAGES

- Excellent resistance to chemical attack
- Excellent abrasion and impact resistance
- Exceptional thermal shock resistance
- Superior bonding qualities
- High cohesive strength and flexibility
- Low permeability
- Low odor

CHEMICAL RESISTANCE

Stonchem 658 is formulated to resist a variety of chemical solutions (Refer to the Stonchem 600 Series Chemical Resistance Guide for lists of reagent concentrations and temperature recommendations.)

PACKAGING

Stonchem 658 is packaged in units for easy handling. Each unit consists of:

Basecoat/Topcoat

- 6 cartons of liquid
- A carton contains:
 - 2 cans of amine
 - 2 cans of resin
 - 7 bags of aggregate

Fiberglass Scrim Cloth

- 1 roll of Fiberglass Scrim Cloth 22.7 m²

PHYSICAL CHARACTERISTICS

Compressive Strength (ASTM C-579)	110 N/mm ²
Tensile Strength (ASTM D-638)	59 N/mm ²
Flexural Strength (ASTM C-580)	90N/mm ²
Flexural Modulus of Elasticity (ASTM C-580)	5.2 x 10 ³ N/mm ²
Hardness. (ASTM D-2240, Shore D)	75 to 85
Abrasion Resistance (ASTM D-4060, CS-17)	0.056 gm max. weight loss
Thermal Coefficient of Linear Expansion (ASTM C-531)	19.9 x 10 ⁻⁵ m/mm°C
Color	Gray

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual system, including binder and filler, were used as test specimens.

COVERAGE

Each unit of Stonchem 658 will cover approximately 22.76 m² at a thickness of 3 mm.

Note: Coverage rates shown are theoretical. Actual coverage rates may vary. Make necessary allowances for the condition of the surface to be coated, working conditions, waste, spillage, experience level and skill of the installers, etc.

STORAGE CONDITIONS

Store all components between 10 to 24°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

SUBSTRATE PREPARATION

General

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent and rinsing with clean water. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, the substrate temperature must be between 15 to 27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 10°C. This will allow the material to achieve a proper cure. Also, a cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (15 to 27°C) will aid in the material's workability; however, a hot substrate (27 to 37°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling. Substrate temperature should be greater than 3°C above dew point.

APPLYING

Priming

Vacuum the surface before priming and make sure the substrate is dry. The use of HT Primer is necessary to ensure maximum product performance. Mix and apply HT Primer in accordance with the product data sheet. Avoid puddling. Allow the primer to cure tack-free prior to application of Stonchem 658.

Basecoat

Individually stir amine and resin to a smooth, uniform consistency and color. Any sediment in the container must be thoroughly scraped up and re-dispersed. Pour the entire contents of the resin into the amine and mix thoroughly for 2 minutes using a Jiffy Mixer. Evenly apply a base coat of material at approximately 50 mil. The preferred hand tools for applying material are a notched squeegee or a notched trowel.

Fiberglass Scrim Cloth

Immediately place a layer of fiberglass scrim cloth into the wet base coat. Overlap seams a minimum of 5 cm and apply a liberal amount of material between the overlapping layers. Use a flat trowel to smooth, flatten and embed the fiberglass scrim cloth. It is critical that the fiberglass scrim cloth be completely saturated and none left exposed.

Broadcast Aggregate

While wet, immediately broadcast the aggregate. Do not allow the aggregate to be broadcast ahead of the applicator. Broadcast the aggregate until a dry layer is achieved. Allow the coating to cure. Remove the excess aggregate.

Topcoat

Apply the topcoat material to seal the exposed aggregate. At least 0.38 mm will be required to adequately cover the exposed aggregate. More may be needed to meet the finish texture and the 3 mm thickness required by the job specification. Allow the material to cure.

Vertical Surfaces

Consult Stonhard's Technical Service Department for a recommendation.

CURING

The surface of Stonchem 658 will be tack-free in 12 to 18 hours at 24°C. The coated area may be put back into service in 36 hours at 24°C. Ultimate physical characteristics will be achieved in 7 days. The curing time may vary depending upon ambient and surface conditions.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperature is 13°C at the time of application.
- Maximum surface temperature should not exceed 32°C during application. Substrate temperatures above 38°C will drastically affect the working time of the product.
- Substrate temperature should be greater than 3°C above dew point.
- Material should not be applied if humidity is above 85%.
- Application and curing times are dependent upon ambient and surface conditions. Consult Stonhard's Technical Service Department if conditions are not within recommended guidelines.

PRECAUTIONS

- Before it cures, Stonchem 658 may be cleaned from tools and equipment using hot, soapy water.
- After Stonchem 658 cures, Xylene or MEK will be required to clean tools and equipment. Chlorinated solvents may be used if flammable solvents are not allowed.
- Avoid contact with eyes and skin; do not ingest or inhale.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles and impermeable gloves are highly recommended.
- When spraying in a confined area, always wear a fresh air hood and make provision for forced ventilation.
- When spraying in an open area, NIOSH/MSHA approved respirators suitable for organic vapors can replace the fresh air hood.
- Prolonged or repeated exposure to the unreacted amine and resin components of Stonchem 658 may cause skin irritation or allergic reactions.

NOTES

- Refer to material safety data sheets regarding individual components. Material safety data sheets are available upon request.
- Specific information regarding the chemical resistance of Stonchem 658 is available in the Stonchem 600 Series Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Stonhard's products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

IMPORTANT:

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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